

REMARKS/ARGUMENTS

Pending claim 1 recites in part that a local oscillator (LO) frequency is determined that is selected from multiple LO selection regions adjacent to and outside of a signal band of a signal channel. The cited art including U.S. Patent No. 5,507,025 (Rodeffer) fails to teach or suggest this subject matter. Here, it appears that the Office Action relies on a teaching in Rodeffer of frequencies for a LO and a center frequency (citing col. 5, lns. 34-44). However, this simply teaches that in a receiver a mixer is tuned such that frequencies for a selected channel are centered with respect to a passband of a bandpass filter. Further, the specific reference to a LO frequency in a range of 1560 – 2060 MHz teaches nothing with regard the recited subject matter of a LO frequency selected from multiple LO selection regions adjacent to and outside of a signal band of a signal channel. In addition, claim 1 describes that the LO frequency be away from a widest signal channel center by less than half of a passband width of a baseband filter. Here, Rodeffer fails to teach or suggest such a baseband filter, as instead its bandpass filters operate at intermediate frequency (IF).

Still further, the operation of the system in Rodeffer is contrary to the subject matter of claim 1. Instead in Rodeffer, an LO frequency is controlled to be within a signal band of a signal channel. This is seen in the various examples described in Rodeffer with regard to its first, second and third local oscillators. For example, with regard to the first oscillator, it is taught that this frequency be made variable between +/- 0.5 of the channel bandwidth. As such, this variable LO frequency is *within* the signal band itself, contrary to the recited subject matter. Still further, this is also contrary to the subject matter of claim 1 that recites that the LO frequency be away from a center of a widest signal channel by greater than half of a signal band of the widest signal channel. Instead, Rodeffer teaches that its LO frequency range be no larger than half of a channel bandwidth. E.g., Rodeffer, column 8, line 66 – column 9, line 16; see also column 9, lines 48-50.

Further, to the extent that the Office Action relies upon the first or second LO's of Rodeffer, such reliance is a further misplaced, as claim 1 recites that the LO frequency is used to downmix a signal channel to a frequency near DC. Instead, Rodeffer teaches that its LO's and mixers operate to create IF signals. E.g., Rodeffer, col. 5 lines 28 – 60.

As to independent claim 26, it is patentable for at least similar reasons as Rodeffer fails to teach that a LO frequency be determined that is selected from LO selection regions adjacent to

and outside of a signal band of a signal channel. As such, claim 26 and the claims depending therefrom are patentable over the cited art. This is so, as the secondary reference deSantis fails to teach or suggest anything in this regard. Instead, deSantis is simply directed to a switching router to provide connectivity in a satellite system.

Independent claim 44 is patentable for at least similar reasons in that the cited art fails to teach or suggest that a satellite signal spectrum is mixed with a LO frequency to downmix a signal channel to a frequency near DC and using a LO frequency determined from a range outside of a signal band of the signal channel.

In view of these remarks, the application is now in condition for allowance and the Examiner's prompt action in accordance therewith is respectfully requested. The Commissioner is authorized to charge any additional fees or credit any overpayment to Deposit Account No. 20-1504.

Respectfully submitted,

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